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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/311,996 | 05/14/1999 | EUGENI A. VAISBERG | 19681-4 | 1991 |

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EXAMINER

SHEINBERG, MONIKA B

ART UNIT PAPER NUMBER

1631

DATE MAILED: 04/02/2002

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/311,996

Applicant(s)

VAISBERG ET AL.

Examiner

Monika B Sheinberg

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 49-61 and 63-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 49-61 and 63-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 04 January 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1 sheet
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment C

Applicants' amendments filed 4 January 2002, are acknowledged with the cancellation of claim 62. The pending claims are 49-61 and 63-65.

Applicants' arguments, filed 4 January 2002, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Information Disclosure Statement

The reference A of the information disclosure statement filed 4 January 2002, continues to fail to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because there is a lack of a publication date. A print-out date is not the equivalent of the date that a publication is made available to the public. Reference B is also lined through due to a lack of publication date. The two reference have been considered, yet are lined through due to lack of publication dates.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1631

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 49-61 and 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biodx, Weaver et al, Pauwels, and Weinstein; or Biodx, Singhvi, Pauwels, and Weinstein; and further in view of Sundblad et al (J. Exp. Botany, 1998).

As described in detail in the Office Action mailed 14 February 2001, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to perform the computer-implemented cellular analysis method of Biodx involving manipulation of cells using any of a thermal factor, gravitational factor, mechanical factor, electromagnetic factor, or nuclear radiation factor and to further alternatively manipulate the cells with a manipulations with properties because doing so would provide information of analysis of mechanism of action of anticancer drugs on neoplastic cell lines as per the teachings of Pauwels. Weaver teaches the use of a gene expression profile in screening a panel of cancer cell lines. Thus, one of ordinary skill in the art would have been motivated to have performed the claimed invention with a reasonable expectation of success.

Biodx, Weaver et al, Pauwels, and Weinstein; or Biodx, Singhvi, Pauwels, and Weinstein do not teach the use of principal component analysis upon the image components of the cellular manipulations.

Sundblad et al demonstrates the "potential for further methodological improvements [of automated measurements of the mitotic index] through multivariate analysis of image analysis parameters" (p. 1749, 2nd column, 2nd paragraph). This is done by the utilization of the principal component analysis (PCA) "to detect cell cycle stage related clustering of nuclei in score plots" (abstract) in addition to "obtain[ing] an overview of differences and similarities between different cell cycle stages in terms of image analysis parameter" (p. 1752, 1st column, 3rd paragraph).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to perform the computer-implemented cellular analysis method of Biodx involving manipulation of cells in view of Weaver, Pauwels, and Weinstein; or in view of Singhvi, Pauwels, and Weinstein; and to modify the cellular image analysis using PCA analysis

Art Unit: 1631

as per the teachings of Sundblad et al. Thus, one of ordinary skill in the art would have been motivated to have performed the claimed invention with a reasonable expectation of success.

Thus in view of Sundblad et al, the rejection is maintained and reiterated from the previous office action mailed February 14, 2001. In addition the arguments made by applicants concerning the 35 U.S.C. 103(a), filed 16 July 2001, were discussed already in the Office Action mailed 2 October 2001.

Therefore, the arguments are non-persuasive to overcome the rejection.

Conclusion

No claim is allowed.

Inquiries

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The CM1 Fax Center number is (703) 308-4242.

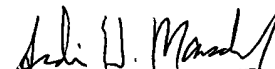
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monika B. Sheinberg, whose telephone number is (703) 306-0511. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Woodward, can be reached on (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Patent Analyst, Tina Plunkett, whose telephone number is (703) 305-3524, or to the Technical Center receptionist whose telephone number is (703) 308-0196.

March 24, 2002

Monika B. Sheinberg
Art Unit 1631

MB


ARDIN H. MARSCHEL
PRIMARY EXAMINER